REMARKS

Prior to this Reply, Claims 1-12 and 30-41 were pending. Through this Reply, Claims 4, 31 and 33 have been cancelled; Claims 42 and 43 have been added; and, Claims 2, 7, 40 and 41 have been amended. Accordingly, Claims 1-3, 5-12, 30, 32 and 34-43 are now at issue in the present case.

I.   Allowable Subject Matter

In the Office Action, the Examiner objected to Claims 4 and 33 as being dependent upon a rejected base claim. However, the Examiner indicated that such claims would be allowable if they were rewritten in independent form to include all limitations of their respective base claims and any intervening claims.

In response, Applicants have cancelled Claims 4 and 33 and have rewritten such claims in independent form as new Claims 42 and 43, respectively. Accordingly, Applicants submit that Claims 42 and 43 are in condition for allowance.

II.   Claim Objections

Claims 2 and 31 were objected to because the Examiner believed that such claims fail to limit the invention claimed in Claims 1 and 30, respectively. In response, Applicants have amended Claim 2, so that it further limits the invention claimed in Claim 1. Furthermore, Applicants have cancelled Claim 31. In view of the above, Applicants believe that the objection to Claim 2 has been overcome, while the objection to Claim 31 is now moot.

Claim 7 was objected to because of an informality. Specifically, in Claim 7, line 9, the language "the data disk" lacked antecedent basis. The objected-to language has been cancelled from Claim 7. Accordingly, Applicants believe that the objection to Claim 7 is now moot.

III. Rejection of Claims Under 35 U.S.C. § 102(e)

In the Office Action, the Examiner rejected Claims 1-3, 5-12, 30-32, 34-36, 40 and 41 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,567,233 to Chew et al. (hereinafter "Chew"). Applicants respectfully traverse the rejection because Applicants believe that Chew fails to disclose all of the limitations of the rejected claims.

Specifically, with respect to Claim 1, Chew does not teach:

"one or more head interfaces, each head interface electrically connected to a transducer head for controlling the transducer head for data read and/or write operations;" and

"a mode controller electrically connected to each head interface, for controlling the operation of each head interface for selectively reading data from at least one recording surface via at least one transducer head while writing data to at least one recording surface via at least one transducer head," as required by Claim 1.

Chew is directed to a shock-sensing method in magnetic hard-disk drives to maintain data integrity when a drive is subjected to external shocks. Chew uses a modified head preamplifier to detect servo fields from adjacent disk surfaces, as well as the disk surface being written or read. When a write head is writing data to a data field on a disk surface, a read head may be reading a servo field from an adjacent surface, insuring that the write head is on-track. By staggering the servo fields from surface to surface, shock may be sensed by measuring

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displacement of read heads on adjacent surfaces between servo sectors on the write surface (see Abstract of Chew).

In Col. 7, lines 50-60 (relied on by the Examiner to reject Claim 1), Chew states:

> In the present invention, read electronics 456 may be modified from the prior art to read servo sector data from adjacent tracks during a write operation. During a write operation, read electronics 456 may signal, through serial interface 455 and serial interface 431, to read/write head enable, to **alternately** read servo data from MR read heads 415 through 414. Thus, for example, in a single disk (two surface) embodiment, **servo data may be alternately read from staggered servo sectors on alternate sides of a disk by toggling between read heads 414 and 415.** Read/write head enable 432 may be modified to allow selection of different read heads during a write operation. (Emphasis added).

As the above passage clearly indicates, Chew discloses reading servo data from two sides of a disk in an alternate fashion. This is done by toggling between read heads on the two sides of the disk to double the effective servo sampling rate. However, unlike the present invention, Chew does not disclose "selectively reading data from at least one recording surface via at least one transducer head while writing data to at least one recording surface via at least one transducer head," as required by Claim 1. For at least these reasons, Applicants believe that Claim 1 is patentably distinguishable from Chew. Furthermore, Applicants submit that the claims that depend from Claim 1 are also patentably distinguishable from Chew.

Claim 30 includes limitations similar to those set forth above in connection with Claim 1. Applicants submit that Claim 30 is patentably distinguishable from Chew for reasons similar to those presented above in connection with Claim 1.

With respect to Claim 2, Chew does not disclose: "reading data from at least one recording surface via at least one transducer head while writing data to a plurality of recording surfaces via a plurality of transducer heads," as required by Claim 2. Instead, Chew discloses

doubling servo sampling by toggling between two read heads for reading servo data, and then using the servo data to position a write head for writing data. For at least these reasons, Applicants believe that Claim 2 is patentably distinguishable from Chew.

With respect to Claim 3, Chew does not disclose that: "the mode controller controls the operation of the head interfaces based on configuration information, wherein the configuration information includes data transfer mode and transducer head selection information," as required by Claim 3. In Col. 7, lines 29-31 (relied on by the Examiner), Chew mentions that: "Instructions from the host CPU may include instructions to read from or write to the disk, to a particular file, sector or the like." Applicants believe that Chew is merely stating that the CPU may send read and/or write commands to the disk drive for data transfer as is usual in any disk data input/output command. This has nothing to do with configuration information for head interfaces, wherein the configuration information includes data transfer mode and transducer head selection information, as claimed in Claim 3. For at least these reasons, Applicants believe that Claim 3 is patentably distinguishable from Chew.

With respect to Claim 5, Applicants believe that Chew does not disclose: "a control interface connected to the mode controller, the control interface for receiving configuration information wherein the mode controller controls the operation of the head interfaces based on the configuration information," as required by Claim 5. The unit 452 in Fig. 4 of Chew (relied upon by the Examiner) is a disk controller interface and acts as a host interface to a host CPU. The disk controller 452 outputs digital data over a local or system bus to a host CPU (not shown) and in return receives data and instructions from host CPU. ENDEC (encoder/decoder) 453 encodes data to be sent to the host CPU and decodes data and instructions received from the host CPU. Instructions from the host CPU may include instructions to read from or write to the disk,

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to a particular file, sector or the like (Col. 7, lines 23-32 of Chew). Nowhere does Chew disclose that the disk controller 452 receives configuration information for a mode controller. The disk controller 452 simply receives CPU instructions and not configuration information. As discussed above, the CPU instructions do not comprise configuration information as claimed in Claim 5. For at least these reasons, Applicants believe that Claim 5 is patentably distinguishable from Chew.

Claim 34 was rejected for the same reasons as Claim 5, as it includes similar limitations. Applicants submit that Claim 34 is patentably distinguishable from Chew for reasons similar to those provided in connection with Claim 5.

With respect to Claim 7, Chew does not disclose that: "the mode controller is further electrically connected to the plurality of the head interfaces, for controlling the operation of the head interfaces based on configuration information for selectively reading data from at least one recording surface while writing data to a plurality of recording surfaces," as required by Claim 7. Chew discloses doubling the servo sampling rate by toggling between two read heads for reading servo data, and then using the servo data to position a write head for writing data. Accordingly, Applicants believe that Claim 7 is patentably distinguishable from Chew.

With respect to Claim 8, such claim adds further limitations to dependent Claim 7 and independent Claim 1 that are not disclosed by Chew. Indeed, Chew does not disclose configuration information which includes transducer head selection and data transfer mode information. Accordingly, Applicants submit that Claim 8 is patentably distinguishable from Chew.

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Claims 32 and 36 were rejected for reasons similar to those provided for Claim 8. Applicants submit that Claims 32 and 36 should be allowed for reasons similar to those provided above in relation to Claim 8 and for the reasons provided in relation to Claim 30.

Claim 35 was rejected for reasons similar to those provided for Claim 1. Applicants submit that Claim 35 is patentably distinguishable for reasons similar to those provided above in relation to Claim 1 and for the reasons provided in relation to Claim 30.

The Examiner rejected Claims 30-32 and 35-36 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,411,459 to Belser et al. (hereinafter "Belser"). Applicants respectfully traverse the rejection because Belser does not disclose all of the limitations of the rejected claims.

With respect to Claim 30, Belser does not disclose "a mode controller ... for controlling the operation of each head interface based on configuration information for selectively reading data from at least one recording surface via at least one transducer head while writing data to at least one recording surface via at least one transducer head," as required by Claim 30. In Col. 5, lines 45-62 (relied on by the Examiner), Belser states:

> In one embodiment, a method of manufacturing a hard disc drive having a magnetic disc assembly with a plurality of disc surfaces is provided. The method includes step (a) where position reference information is written on a reference disc surface 130 of the magnetic disc assembly 106, before the magnetic disc assembly 106 is mounted within the hard disc drive 100. In some embodiments, the position information is written over substantially all of the reference disc surface 130. At step (b), the magnetic disc assembly 106 is mounted within the hard disc drive 100. Once the disc assembly 106 is mounted within the hard drive 100, step (c) is performed where servo information is written on a selected disc surface 132 (which may be the reference disc surface 130) of the magnetic disc assembly 106 based upon the position reference information. Finally, the position reference information can be erased in order to accommodate user data.

Applicants submit that there is no disclosure in the above passage of Belser about selectively reading data from at least one recording surface via at least one transducer head while writing data to at least one recording surface via at least one transducer head, as claimed by Claim 30. The above passage simply discusses that position information is written on a reference disk surface 130 which is then placed in a disk drive. Later servo information is written on another disk 132 using that position information. Applicants were unable to locate any disclosure in Belser of selectively reading data from at least one recording surface via at least one transducer head while writing data to at least one recording surface via at least one transducer head.

For at least the above reasons, Applicants submit that Claim 30 is patentably distinguishable from Belser. For at least the same reasons, Applicants believe that the claims that depend from Claim 30 are likewise patentably distinguishable from Belser.

IV.   Claim Rejections under 35 U.S.C. §103(a)

The Examiner rejected Claims 37-39 under 35 U.S.C. 103(a) as being unpatentable over Belser as applied to Claim 30, and further in view of U.S. Patent No. 6,304,407 to Baker et al. (hereinafter "Baker"). Applicants traverse the rejection.

Claims 37-39 are believed to be patentably distinguishable from Belser and Baker for at least the reasons provided above with respect to Claim 30, as Baker does not supply the missing limitation.

Further, as the Examiner states, Belser does not teach or suggest the reference patterns in Claims 37-39. Additionally, Baker was invented by employees of Quantum Corporation and the inventors assigned the original application to Quantum Corporation, as set forth in the Patent

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Assignment recorded at reel 009717, frame 0909. The above-captioned patent application was also invented by employees of Quantum Corporation and the inventors assigned the captioned patent application as set forth in the Patent Assignment recorded at reel 011384, frame 0416. Baker and the above-captioned application were subsequently assigned from Quantum Corporation to Maxtor Corporation, as set forth in the Patent Assignment Agreement recorded at reel 012653, frame 0726.

Applicants certify that the subject matter of Baker and the claimed invention of the above-captioned application were, at the time the claimed invention of the above-captioned application was made, owned by or subject to an obligation of assignment to Quantum Corporation. Subject matter developed by another person, which qualifies as prior art only under one or more of sections (e), (f) and (g) of Section 102, shall not preclude patentability under Section 103 where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person (35 U.S.C. 103(a)). As a result, Baker cannot be used to sustain the rejections in the Office Action. Therefore, Applicants submit that the rejection of Claims 37-39 (and all claims dependent therefrom) should be withdrawn. If Baker is not removed as a reference, Applicants reserve the right to present further arguments in support of allowability of Claims 37-39.

V. Additional Claim Fees

In determining whether additional claim fees are due, reference is made to the Fee Calculation Table (below).

Fee Calculation Table

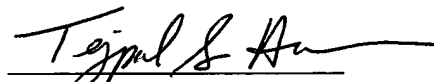|	Claims Remaining After Amendment		Highest Number Previously Paid For	Present Extra	Rate	Additional Fee
Total (37 CFR 1.16(c))	23	Minus	39	= 0	x $18 =	$ 0.00
Independent (37 CFR 1.16(b))	4	Minus	4	= 0	x $86 =	$ 0.00

As set forth in the Fee Calculation Table (above), Applicants previously paid claim fees for thirty-nine (39) total claims and for four (4) independent claims. Accordingly, Applicants believe that no additional claim fees are due. Nevertheless, the Commissioner is hereby authorized to charge Deposit Account No. 50-2198 for any fee deficiencies associated with filing this paper.

VI.   <u>Conclusion</u>

Applicants believe that the application appears to be in form for allowance. Accordingly, reconsideration and allowance thereof is respectfully requested.

The Examiner is invited to contact the undersigned at the below-listed telephone number regarding any matters relating to the present application.

Respectfully submitted,

Tejpal S. Hansra
Registration No. 38,172
Hansra Patent Services
4525 Glen Meadows Place
Bellingham, WA 98226
(360) 527-1400

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